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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,547	12/05/2003	Mark E. Thompson	10020/30901	4336
26646	7590	04/21/2005	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			GARRETT, DAWN L	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,547

Applicant(s)

THOMPSON ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-16 and 20 is/are rejected.
- 7) ☒ Claim(s) 8-10, 17-19 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3-15-04; 3-17-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date, _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Murase et al. (US 2003/0082406). Murase et al. disclose electroluminescent devices comprising a layer of a host material and a dopant such as magnesium phthalocyanine (see par. 8 and 54). The magnesium of the complex reads upon the “alkali metal or an alkaline earth metal” and the organic portion of the chelating phthalocyanine reads upon the “metal binding agent”.

3. Claims 1-3, 6, 7, 12, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (US 2004/0207318 A1). Lee et al. discloses a luminescent device comprising an electron transporting layer formed of Alq mixed with Liq (8-quinolinolato lithium) in a ratio of 3:1 (see par. 52). The Alq reads upon the host material. The lithium in the complex reads upon the alkali metal and the organic portion of the complex reads upon the metal binding agent. The device further comprises a light emitting layer and a hole transporting layer (see par. 52).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 11- 15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo et al. (US 2002/0086180). Seo et al. discloses luminescent devices comprising a hole transporting mixed layer, a bipolar-natured mixed layer and/or a electron transporting mixed layer (see abstract). Seo et al. discloses both beryllium metal complex BeBq₃ and bathocuproine BCP may be used as electron transporting material (see par. 184). The beryllium reads upon the alkaline earth metal, the remaining portion of the BeBq₃ compound reads upon the “metal binding agent”, and BCP reads upon the required host material. Although Seo et al. fails to exemplify a device wherein more BCP is deposited than BeBq₃ in a region, it would have been obvious to one of ordinary skill in the art to have formed a electron transport region with more BCP than BeBq₃, because Seo et al. teaches both materials are suitable electron transporting materials. It is obvious to use any ratio of two compounds useful for the same purpose in the same layer. With regard to claims 3, 4, and 12-15 Seo et al. teaches further regions such as an emissive region and teaches regions of concentration gradients (see abstract).

Allowable Subject Matter

6. Claims 8-10, 17-19, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The closest prior art has been discussed herein. The prior art fails to teach a metal binding agent comprising a crown ether, cryptand or a compatibilizer (as defined by applicants) in combination with the other components of an organic light emitting device layer. The prior art further fails to teach the oligofluorene

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compounds set forth in claim 21 in an electron transporting material in combination with the other required components of a device.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571)272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DAWN GARRETT
PRIMARY EXAMINER
1774

D.G.
April 18, 2005